

In the Claims

1 Claims 1 – 10 (cancelled without prejudice)

1 11. (cancelled)

6 1 ~~12.~~ (currently amended) The apparatus of claim ~~15/44~~ wherein said top and bottom
2 layer are composed of material different from that composing said middle layer so that a
3 selective etchant of said middle layer is used to define said channel.

7 1 ~~13.~~ (currently amended) The apparatus of claim ~~15/44~~ where said multilayered
2 structure forms a middle layer with a thickness, d, in the range of 1 – 5nm.

8 1 ~~14.~~ (currently amended) The apparatus of claim ~~15/44~~ further comprising a plurality
2 of offset holes in said top and bottom layer.

1 1 ~~15.~~ (currently amended) An apparatus comprising:
2 a multilayered structure having at least a top layer, a middle layer and a bottom
3 layer adjacent to each other, where the middle layer has a thickness, d;
4 at least a first hole in the top layer and through the middle layer;

5 at least a second hole in the bottom layer and through the middle layer, the first
6 and second holes being offset from one another;
7 a channel having a height of d or smaller, the channel being defined in the middle
8 layer and communicating with the first and second holes so that only objects having a
9 size of d or smaller may traverse the multilayered structure through the first and second
10 holes and the channel; and

11 ~~The apparatus of claim 11 further comprising~~ a conductive layer on said top and
12 bottom layers for the application of a signal to said conductive layer on said top and
13 bottom layers to trap charged organic molecules traversing said structure, to vary
14 filtration realized through said channel by means of channel restriction, or to provide
15 valving through said channel.

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1 ~~16.~~ (original) The apparatus of claim ~~15~~ further comprising a source of a variable
2 radiofrequency signal to selectively match specific organic molecules traversing said
3 structure.

3
1 ~~17.~~ (original) The apparatus of claim ~~15~~ further comprising a source of a variable DC
2 signal to vary filtration realized through said channel by means of channel restriction, or
3 to provide valving through said channel.

4
1 ~~18.~~ (original) The apparatus of claim ~~15~~ where said first and second hole are
2 simultaneously defined through said conductive layer on said top and bottom layers.

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- 1 ~~19~~. (original) The apparatus of claim ~~18~~ where said first and second hole are
- 2 delineated using electron beam lithography and wherein one of said top and bottom
- 3 layers can be imaged while said other one of said top and bottom layers is
- 4 lithographically delineated.

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- 1 Claims 20 – 24 (cancelled without prejudice)
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